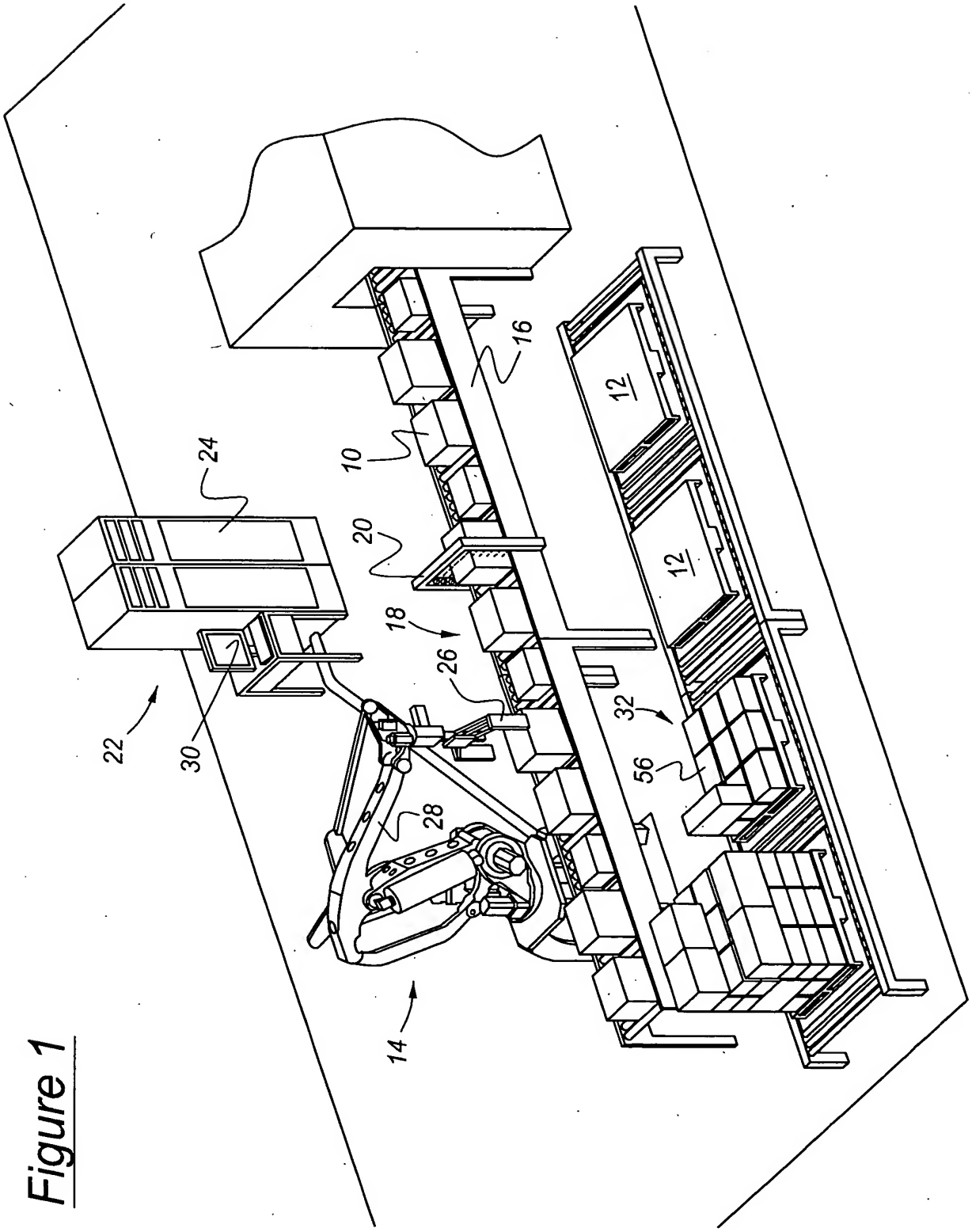


Figure 1

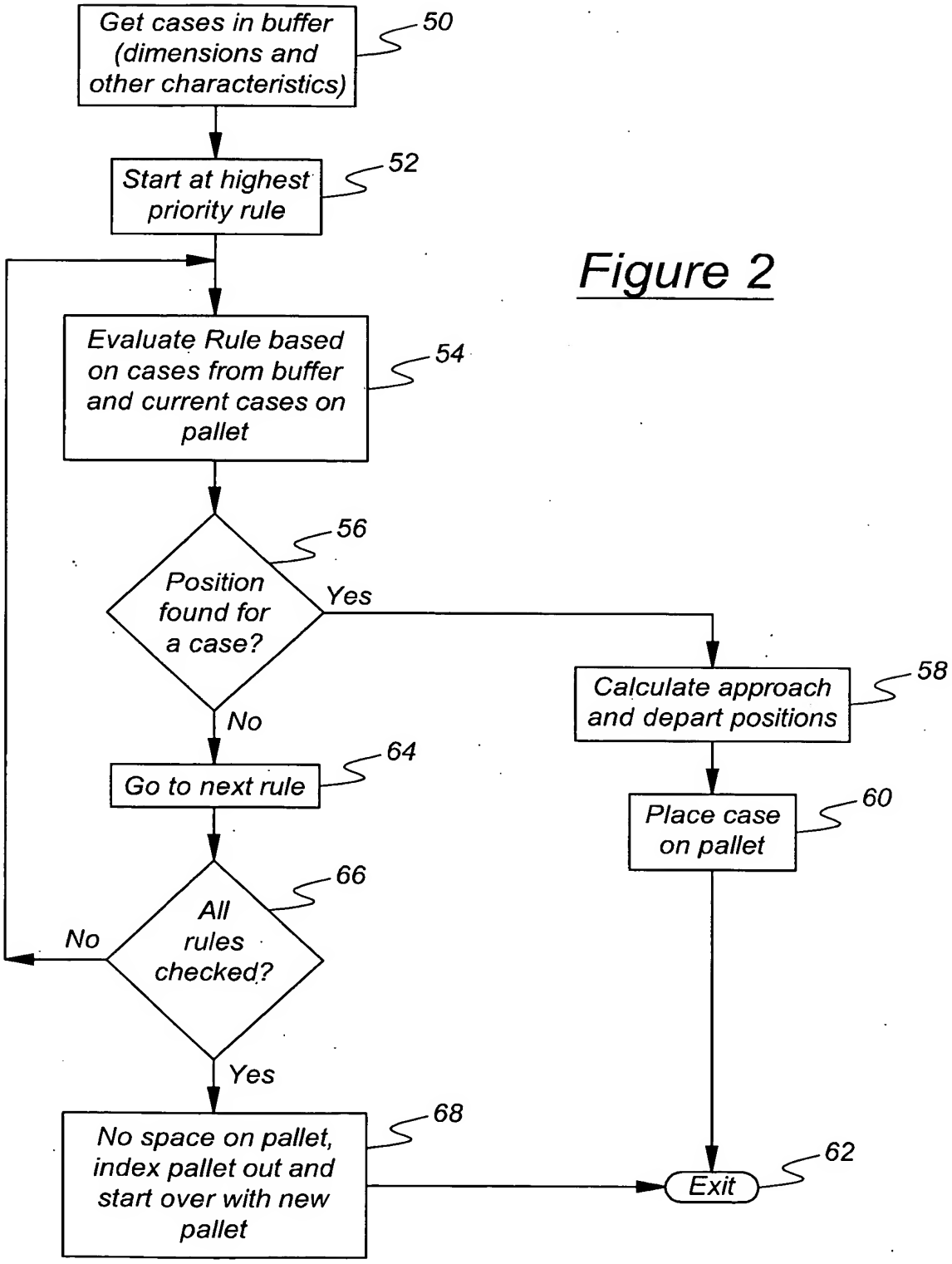

Get cases in buffer (dimensions and other characteristics)
50
Start at highest priority rule
52
Evaluate Rule based on cases from buffer and current cases on pallet
54
Position found for a case?
56
Yes
No
Calculate approach and depart positions
58
Place case on pallet
60
Go to next rule
64
All rules checked?
66
No
Yes
No space on pallet, index pallet out and start over with new pallet
68
Exit
62

Figure 2

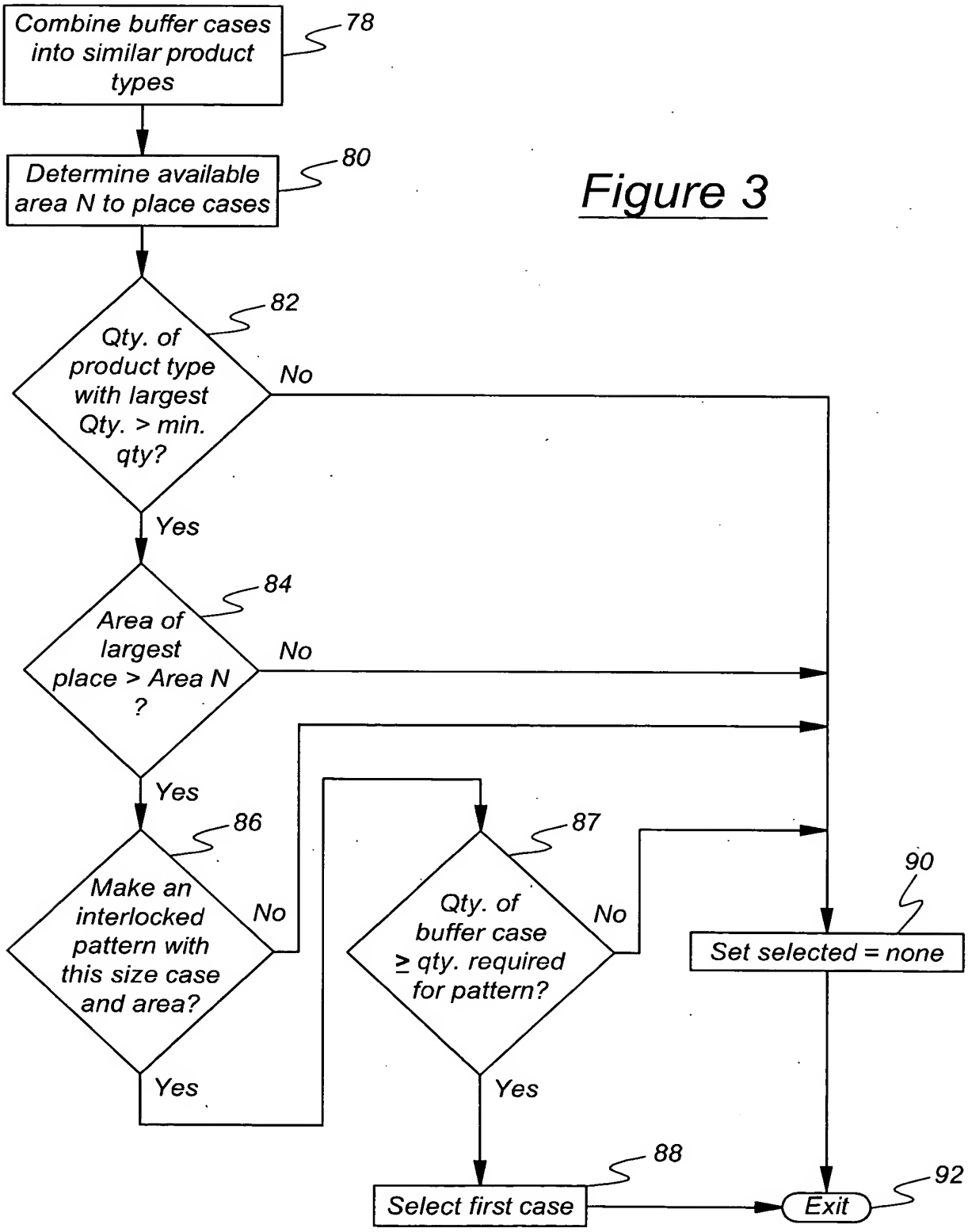
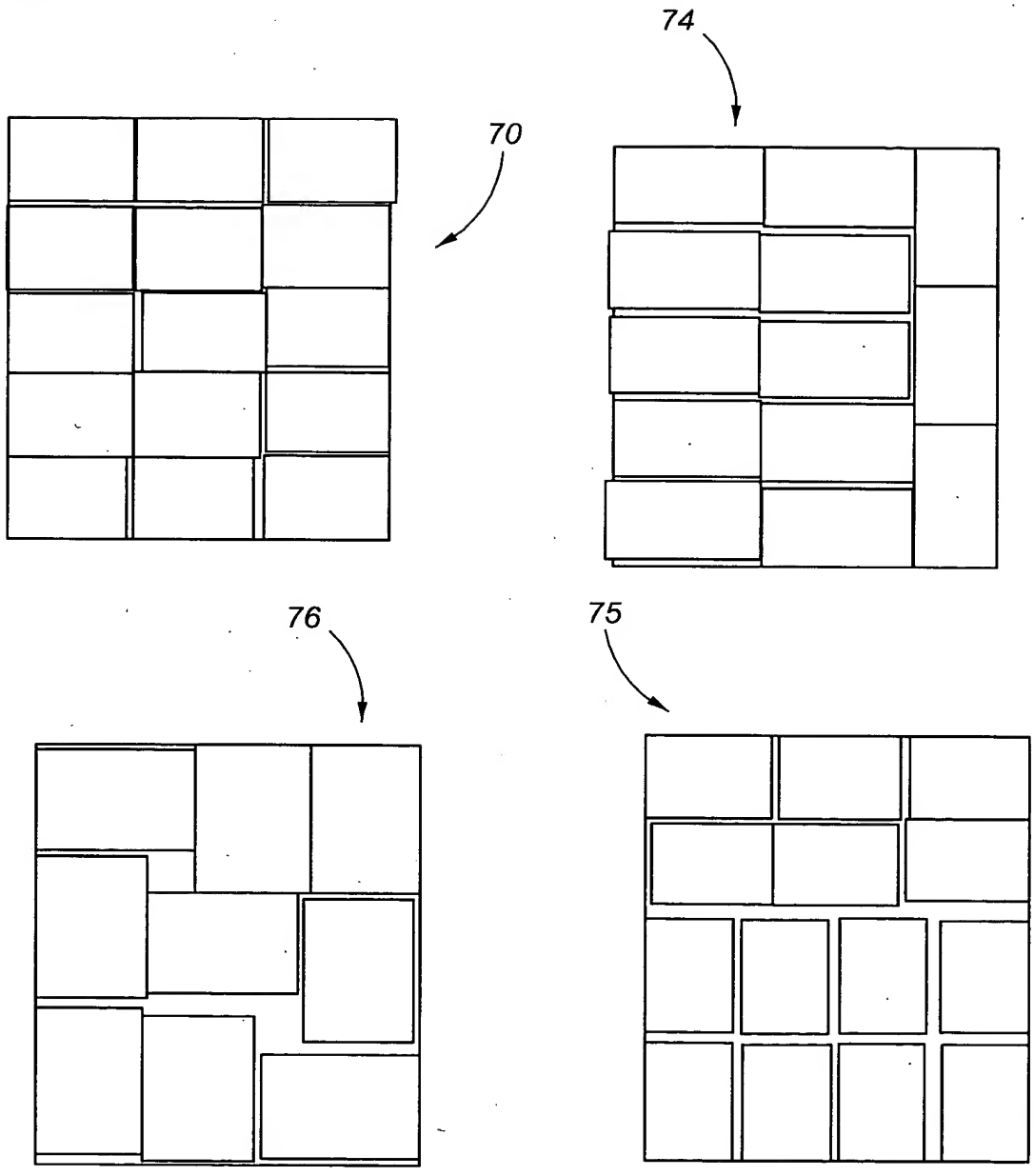

Combine buffer cases into similar product types
78
Determine available area N to place cases
80
Qty. of product type with largest Qty. > min. qty?
82
No
Yes
Area of largest place > Area N ?
84
No
Yes
Make an interlocked pattern with this size case and area?
86
No
Yes
Qty. of buffer case ≥ qty. required for pattern?
87
No
Yes
Set selected = none
90
Select first case
88
Exit
92

Figure 3

Figure 4



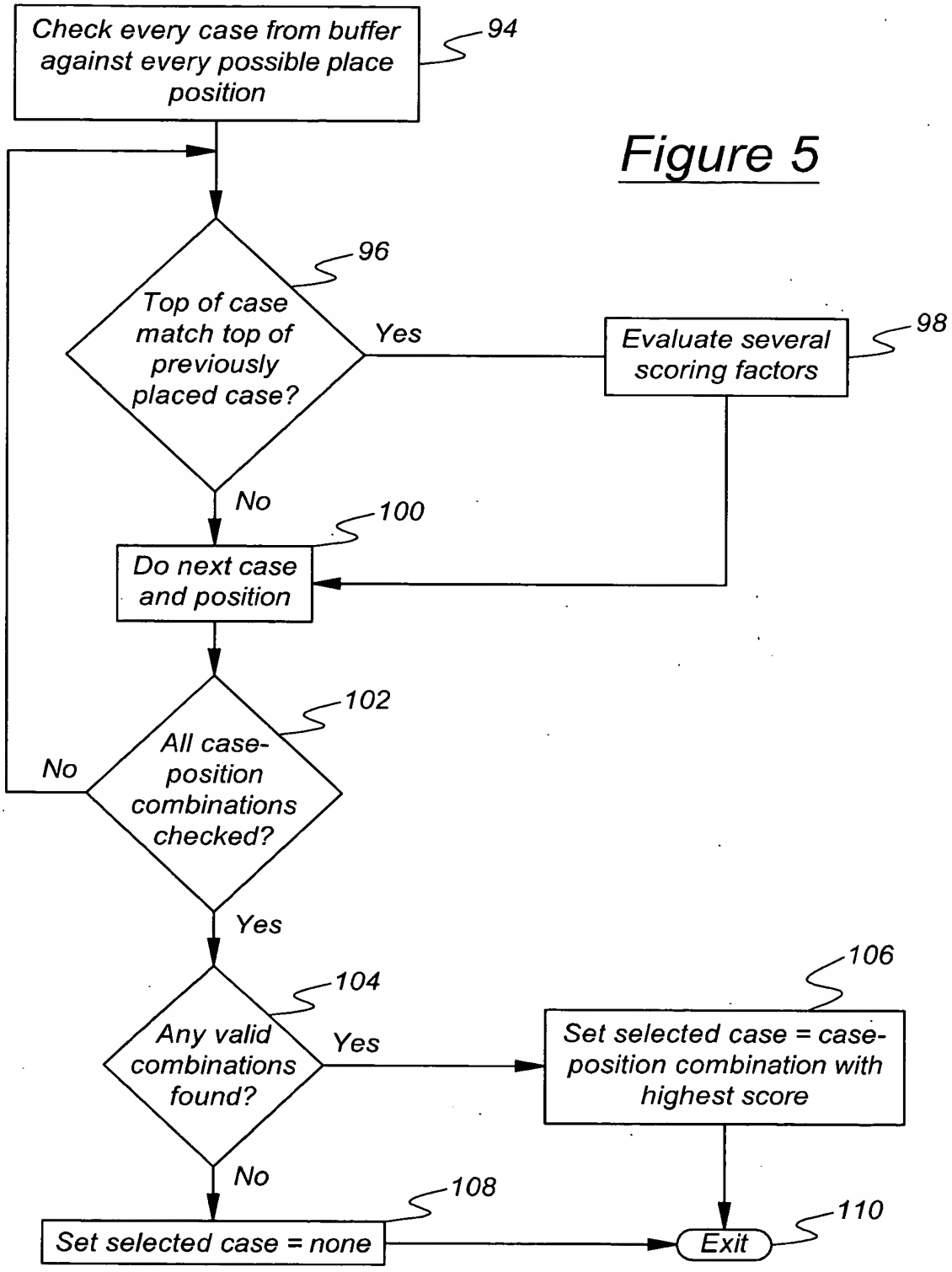

Check every case from buffer against every possible place position
94
96
Top of case match top of previously placed case?
Yes
Evaluate several scoring factors
98
No
100
Do next case and position
102
All case-position combinations checked?
No
Yes
104
Any valid combinations found?
Yes
106
Set selected case = case-position combination with highest score
No
108
Set selected case = none
110
Exit

Figure 5

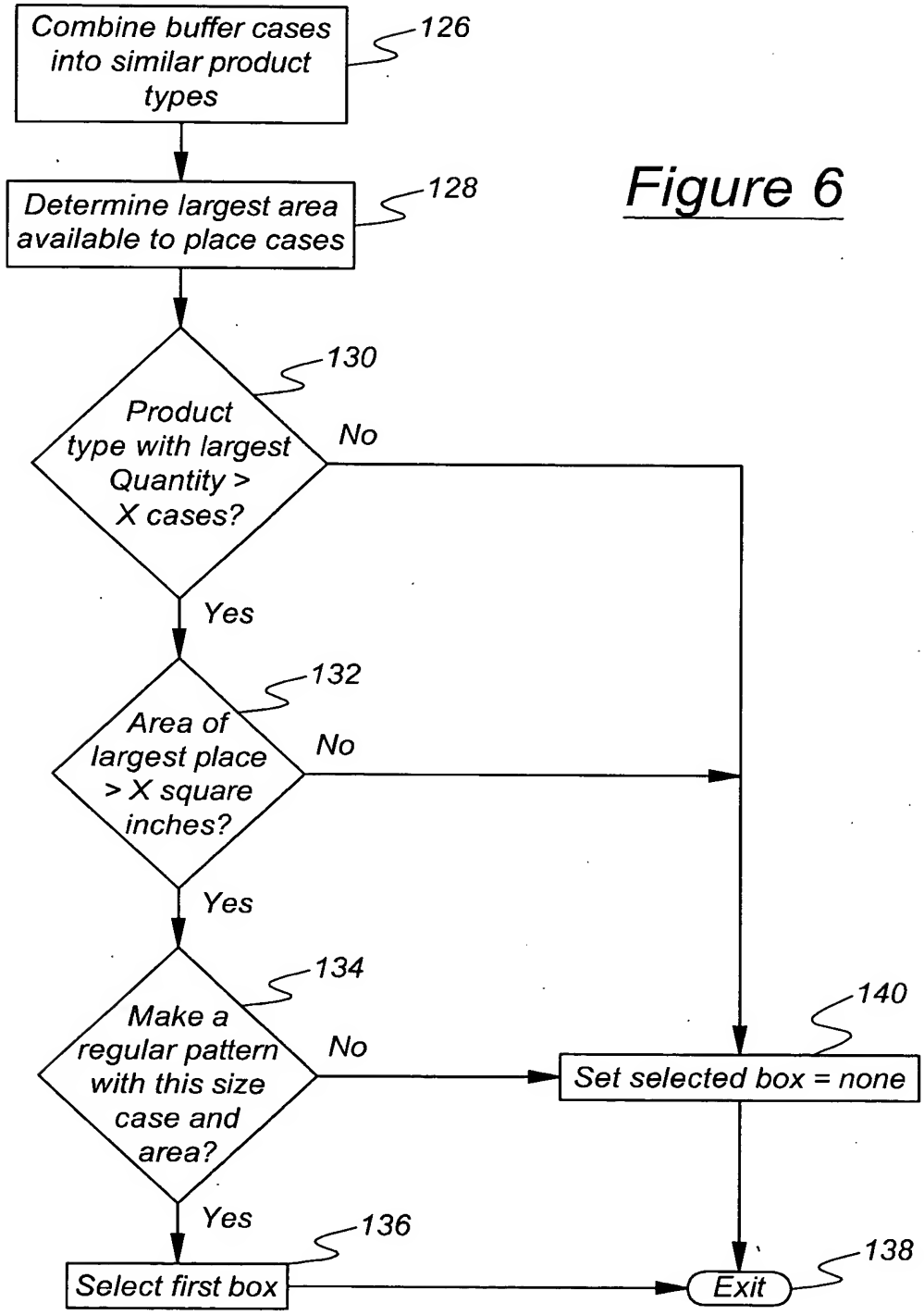
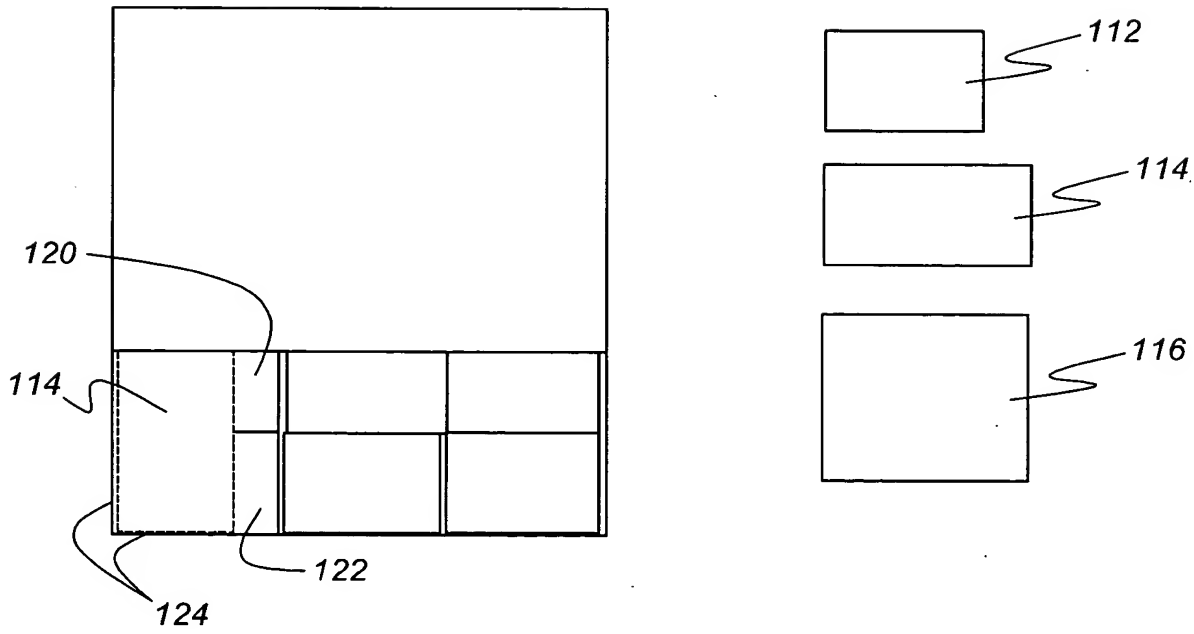

Combine buffer cases into similar product types
126
Determine largest area available to place cases
128
130
Product type with largest Quantity > X cases?
No
Yes
132
Area of largest place > X square inches?
No
Yes
134
Make a regular pattern with this size case and area?
No
Yes
140
Set selected box = none
136
Select first box
138
Exit

Figure 6

Figure 7



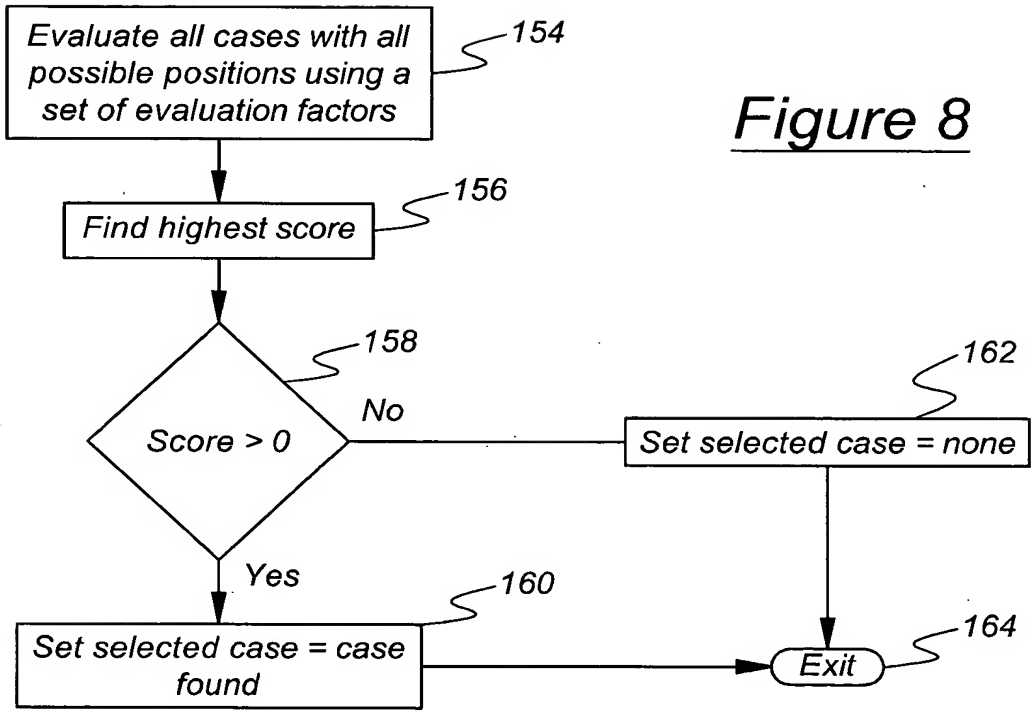

Evaluate all cases with all possible positions using a set of evaluation factors
154
Find highest score
156
158
Score > 0
No
Yes
162
Set selected case = none
160
Set selected case = case found
164
Exit

Figure 8

Figure 9

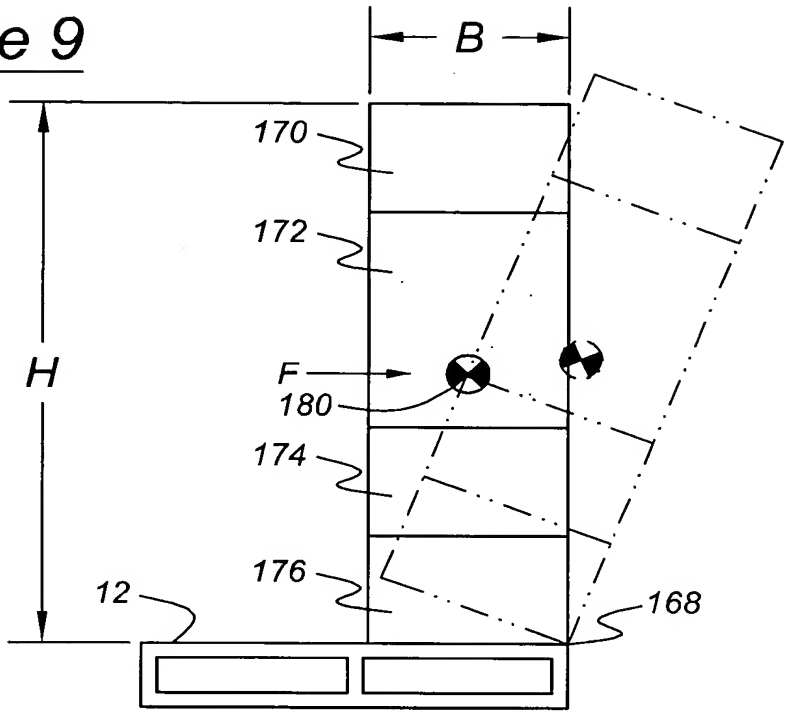
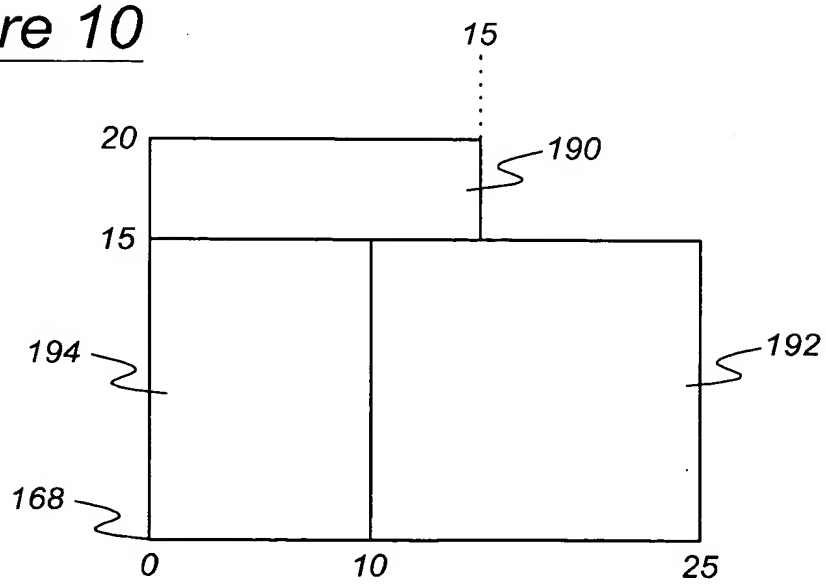



Figure 10